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[54] **METHOD AND APPARATUS FOR CONTROLLING ELECTRONIC TONE GENERATION IN ACCORDANCE WITH A DETECTED TYPE OF PERFORMANCE GESTURE**

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[52] U.S. Cl. **84/600; 84/658; 84/723; 84/734; 84/742; 84/743**

[58] **Field of Search** **84/DIG. 12, 723-725, 84/730, 742-745, 603, 615, 626, 600, 658, 734; 382/1, 4, 8, 16, 25, 28**

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[57] **ABSTRACT**

A method and apparatus for controlling electronic tone generation determines a type of gesture used by a player to contact a performance surface provided with an array of pressure sensors. The performance surface repeatedly is scanned to determine which of the sensors has been activated at each scan time. When a player contacts the performance surface, parameter data associated with the incoming gesture is compared with gesture recognition rules corresponding to various reference gestures. The gesture recognition rules may be preset, and/or the control system may be provided with an optional programming capability which allows the player to establish individualized gesture recognition rules in accordance with reference gestures input by the player. An electronic tone generator is controlled in accordance with the reference gesture which is determined to best fit an incoming gesture. Furthermore, the electronic tone generator may be controlled to generate a tone having a particular tone characteristic determined in accordance with a corresponding parameter of a particular gesture type such that a player may achieve a timbral variation simply by modifying the corresponding parameter of the particular reference gesture.

23 Claims, 6 Drawing Sheets

